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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/609,470 | 07/01/2003 | Atsushi Yasuno | 03500.017390. | 1051 |
| 5514 | 7590 | 07/07/2006 | EXAMINER | |
| FITZPATRICK CELLA HARPER & SCINTO | | | FULLER, ERIC B | |
| 30 ROCKEFELLER PLAZA | | | ART UNIT | |
| NEW YORK, NY 10112 | | | PAPER NUMBER | |

1762

DATE MAILED: 07/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/609,470

Applicant(s)

YASUNO, ATSUSHI

Examiner

Eric B. Fuller

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 15-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>1</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of Group 1, claims 1-14, in the reply filed on April 27, 2006 is acknowledged. The traversal is on the grounds that it is not understood how the apparatus may be used in an etching process. This is not found persuasive because a reference that teaches the claimed method must have a film deposited. However, a reference that teaches the claimed method does not require a film being deposited. An apparatus that uses a plasma to etch a substrate may still read on the applicant's apparatus claims.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 5, and 9-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Sakai et al. (US 6,779,482 B2).

Sakai teaches a process for forming semiconductor films (column 3, lines 29-35) that uses a plurality of electrodes for forming the plasma that decomposes the reactant gas (column 3, lines 3-47). The electrodes use electronic energy. The energy supplied to the electrodes is temporally staggered by sequentially switching the voltage supplied to each electrode in such a way that the radicals formed in the plasma are sent sequentially from the left end of the substrate to the right end, thus forming a uniform layer (column 3, lines 65-67; column 9-59). The spacing and pressure are read upon in example 1 (column 8, line 59 - column 9, line 29) and table 1.

Claims 1, 6-11 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Moslehi (US 5,273,609).

Moslehi teaches a process for forming a semiconductor film (column 1, lines 49-55). The process uses multiple plasma sources and senses multiple conditions such as temperature, time, voltage, and current which activate switches that turn the plasma source from one to the other (column 4, lines 5-43; column 8, lines 10-55; figure 2). Column 8, line 56 - column 12, line 36, with reference to figure 2, anticipates all the limitations of these claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakai et al. (US 6,779,482 B2).

Claims 3 and 4 read as claims 1 and 2, respectively, with the addition of multiple reactors. Sakai is silent to multiple reactors. However, to include additional reactor would have been obvious at the time the invention was made to a person having ordinary skill in the art, as including additional reactors is merely a duplication of parts. By doing so, one would reap the benefits of being able to process more substrates in the same amount of time.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moslehi (US 5,273,609).

Claim 3 reads as claims 1 with the addition of multiple reactors. Moslehi is silent to multiple reactors. However, to include additional reactor would have been obvious at the time the invention was made to a person having ordinary skill in the art, as including additional reactors is merely a duplication of parts. By doing so, one would reap the benefits of being able to process more substrates in the same amount of time.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Li et al. (US 5,759,237) is additionally cited as teaching a plurality of discharging means.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric B. Fuller whose telephone number is (571) 272-1420. The examiner can normally be reached on Mondays through Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Meeks, can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



EBF



TIMOTHY MEEKS
SUPERVISORY PATENT EXAMINER